

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A mobile Internet Protocol (IP) system, comprising:
a mobile node initially linked to a first foreign network;
a home agent receiving a set of data packets, which are supposed to be transmitted to said mobile node, said home agent being included in a home network of said mobile node;
and
a first foreign agent initially receiving said packets from said home agent and storing them in a buffer and additionally sending said stored packets to a second foreign agent included in a second foreign network if said mobile node is moved to said second foreign network, said first foreign agent being included in said first foreign network, wherein said mobile node sends a notification message to said first foreign agent if said mobile node is moved from said first foreign network to said second foreign network.
2. (Original) The mobile IP system of claim 1, wherein said first foreign agent deletes said stored packets after sending said stored packets to said second foreign agent.

3. (Original) The mobile IP system of claim 1, wherein said first foreign agent additionally sends said stored packets to said mobile node if said mobile node continues to be linked to said first foreign network.

4. (Original) The mobile IP system of claim 3, wherein said first foreign agent deletes said stored packets after sending said stored packets to said mobile node.

5. (Original) The mobile IP system of claim 1, wherein said buffer is coupled to said first foreign agent.

6. (Canceled)

7. (Previously Presented) The mobile IP system of claim 1, wherein said first foreign agent determines whether said mobile node is moved to said second foreign network by checking whether said notification message is received from said mobile node.

8. (Previously Presented) A method of transmitting data in a mobile Internet Protocol (IP) network, the method comprising:

(a) transmitting a set of data packets to a home agent of a mobile node, said mobile node being currently linked to a first foreign network having a first foreign agent;

(b) sending said packets received by said home agent to said first foreign agent and storing them in a first buffer;

(c) sending a notification message from said mobile node to said first foreign agent when said mobile node moves from the first foreign network to a second foreign network having a second foreign agent;

(d) sending said packets stored in said first buffer to said second foreign agent and storing them in a second buffer if said first foreign agent receives said notification message; and

(e) transmitting said packets stored in said second buffer to said mobile node.

9. (Original) The method of claim 8, wherein said first buffer is coupled to said first foreign agent.

10. (Original) The method of claim 8, wherein said second buffer is coupled to said second foreign agent.

11. (Previously Presented) The method of claim 8, further comprising deleting said packets stored in said first buffer after sending said packets stored in said first buffer to said second foreign agent.

12. (Previously Presented) The method of claim 8, further comprising transmitting said packets stored in said first buffer to said mobile node if said mobile node continues to be linked to said first foreign network.

13. (Previously Presented) The method of claim 12, further comprising deleting said packets stored in said first buffer after transmitting said packets stored in said first buffer to said mobile node.

14. (Canceled)

15. (Previously Presented) A data routing method of a first foreign agent in a mobile Internet Protocol (IP) network, the method comprising:

- (a) receiving a set of data packets and storing them in a buffer;
- (b) determining a mobile node to which said packets are supposed to be transmitted;
- (c) sending a notification message from the mobile node to a first foreign agent if said mobile node moves from a first foreign network to a second foreign network;
- (d) determining if said determined mobile node is moved to the second foreign network having a second foreign agent; and

(e) transmitting said packets stored in said buffer to said second foreign agent if said mobile node is moved to said second foreign network and said notification message has been received by the first foreign agent.

16. (Previously Presented) The method of claim 15, further comprising deleting said packets stored in said buffer after transmitting said packets stored in said buffer to said second foreign agent.

17. (Previously Presented) The method of claim 15, further comprising transmitting said packets stored in said buffer to said mobile node if said mobile node continues to be linked to said first foreign network.

18. (Previously Presented) The method of claim 17, further comprising deleting said packets stored in said buffer after transmitting said packets stored in said buffer to said mobile node.

19. (Original) The method of claim 15, wherein said buffer is coupled to said first foreign agent.

20. (Canceled)

21. (Previously Presented) The method of claim 15, wherein said determining is performed by checking whether said notification message is received from said mobile node.

22. (Currently Amended) The method of claim 15, wherein an IP address of said second foreign agent is ~~indicated~~ included in said notification message.

23. (Previously Presented) A mobile Internet Protocol (IP) method comprising:
receiving packets at a first foreign agent associated with a first foreign network;
storing said packets in a first buffer;
sending a notification message from a mobile node to the first foreign agent when the mobile node moves from the first foreign network to a second foreign network; and
sending said packets in said first buffer to a second foreign agent associated with the second foreign network upon said notification message being received by the first foreign agent.

24. (Previously Presented) The method of claim 23, further comprising storing said packets in a second buffer associated with said second foreign agent.

25. (Previously Presented) The method of claim 23, further comprising deleting said packets stored in said first buffer after sending said packets to said second foreign agent.

26. (Canceled)
27. (Previously Presented) The method of claim 23, further comprising:
sending said packets to a home agent; and
sending said packets from said home agent to said first foreign agent.
28. (Previously Presented) The mobile IP system of claim 1, wherein the home agent comprises a router of the home network of the mobile node.
29. (Previously Presented) The mobile IP system of claim 1, wherein the mobile node further registers to the home agent if the mobile node is moved to the second foreign network.
30. (Previously Presented) The mobile IP system of claim 1, wherein upon determination that a notification message has been received from another foreign agent, said first foreign agent sends said stored packets to said first foreign agent and deletes said stored packets.
31. (Previously Presented) The mobile IP system of claim 1, wherein the notification message includes an IP address of the mobile node, an IP address of the first foreign agent and a care-of-address (COA) of the mobile node.

32. (Previously Presented) The mobile IP system of claim 31, wherein the COA represents an IP address of the second foreign agent.

33. (Previously Presented) The method of claim 8, wherein the notification message includes an IP address of the mobile node, an IP address of the first foreign agent and a care-of-address (COA) of the mobile node.

34. (Previously Presented) The method of claim 33, wherein the COA represents an IP address of the second foreign agent.

35. (Previously Presented) The method of claim 15, wherein the notification message includes an IP address of the mobile node, an IP address of the first foreign agent and a care-of-address (COA) of the mobile node, and the COA represents an IP address of the second foreign agent.

36. (Previously Presented) The method of claim 23, wherein the notification message includes an IP address of the mobile node, an IP address of the first foreign agent and a COA of the mobile node, and the COA represents an IP address of the second foreign agent.